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FILE 'USPAT2' ENTERED AT 10:43:44 ON 04 APR 2003

CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

=> s l1 or delphinidin or anthocyanin or flavonoid or blackcurrant or currant

17 FILES SEARCHED...

34 FILES SEARCHED...

L2 113140 L1 OR DELPHINIDIN OR ANTHOCYANIN OR FLAVONOID OR BLACKCURRANT

OR CURRANT

=> s reverse osmosis
L3 39586 REVERSE OSMOSIS

=> s l2 and l3
L4 45 L2 AND L3

=> s negative
34 FILES SEARCHED...
L5 2853683 NEGATIVE

=> s negative?
21 FILES SEARCHED...
L6 3125717 NEGATIVE?

=> s l4 and l6
L7 7 L4 AND L6

=> dup rem
ENTER L# LIST OR (END):17
DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGLAUNCH,
DRUGMONOG2, KOSMET, MEDICONF, NUTRACEUT, PCTGEN, PHARMAML'.
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PROCESSING COMPLETED FOR L7
L8 7 DUP REM L7 (0 DUPLICATES REMOVED)

=> d l8 1-7 ibib, kwic

L8 ANSWER 1 OF 7 USPATFULL
ACCESSION NUMBER: 2002:256201 USPATFULL
TITLE: Antibacterial member, method of preparing the same,
antibacterial filter and antibacterial container
INVENTOR(S): Shimada, Kazunori, Shibuya, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002139732	A1	20021003
APPLICATION INFO.:	US 2001-21029	A1	20011219 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-386753	20001220
	JP 2001-351648	20011116
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Finnegan, Henderson, Farabow,, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC, 20005-3315	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	7 Drawing Page(s)	
LINE COUNT:	833	

SUMM . . . in water, a method of filtrating to remove germs in water by
using a hollow fiber membrane filter or a **reverse-**
osmosis membrane filter, a method of extinguishing germs of
various sorts in water such as by heating, applying a pressure,
supplying. . .

DETD . . . heavy metal-removing layer A, an activated carbon layer B, a
heavy metal-adsorbing mat C, a reducing ceramic layer D, a
negative ionic ceramic layer E and a functional ceramic layer F.

DETD . . . is used and for the use of water. The propolis component is the
one contained in the propolis such as **flavonoid**, quercetin,
phenetyl ester of caffeic acid, chlordan-type diterpene or antipyrin C,
and exhibits antibacterial action, anti-inflammatory action,

antioxidizing action and. . .

DETD [0037] The **negative** ionic ceramic layer E is fulfilled with ceramic particles prepared by mixing powdered ore to the potter's clay followed by. . .

DETD [0041] First, the water-insoluble propolis material is dissolved in alcohol, acetone or ether to form a solution extracted with much **flavonoid** component from the propolis. As the water-insoluble propolis material described above, for example, a frozen mass of propolis is pulverized. . .

DETD . . . the antibacterial member to be mixed in the filter member, may be reducing ceramics such as .pi.-water ceramics, calcium ceramics, **negative** ionic ceramics or alkali ceramics, or far infrared ray ceramics. Further, they may be such ores as natural zeolite, natural. .

DETD . . . heavy metal-removing layer A, an activated carbon layer B, a heavy metal-adsorbing mat C, a reducing ceramic layer D, a **negative** ionic ceramic layer E and a functional ceramic layer F. The members constituting the layers are the same as those. . .

DETD . . . bone charcoal layer A, an activated carbon layer B, a heavy metal-adsorbing mat C, a reducing ceramic layer D, a **negative** ionic ceramic layer E and a functional ceramic layer F. The members constituting the layers are the same as those. . .

DETD . . . adsorbs heavy metals contained in water. The ceramic particle layer D is fulfilled with particles such as of reducing ceramics, **negative** ionic ceramics and functional ceramics like the ceramic particles of the first to third embodiments, to form functional water favorable. . .

L8 ANSWER 2 OF 7 USPATFULL

ACCESSION NUMBER: 2001:82537 USPATFULL

TITLE: Methods for generating and screening novel metabolic pathways

INVENTOR(S): Peterson, Todd C., Coronado, CA, United States
Brian, Paul, San Diego, CA, United States

PATENT ASSIGNEE(S): Terragen Discovery, Inc., Vancouver, Canada (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6242211	B1	20010605
APPLICATION INFO.:	US 1999-263352		19990305 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1997-986186, filed on 5 Dec 1997 Continuation-in-part of Ser. No. US 1996-738944, filed on 24 Oct 1996, now patented, Pat. No. US 5783431 Continuation-in-part of Ser. No. US 1996-639255, filed on 24 Apr 1996, now patented, Pat. No. US 5824485		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Brusca, John S.		
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP		
NUMBER OF CLAIMS:	24		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	27 Drawing Figure(s); 23 Drawing Page(s)		
LINE COUNT:	4890		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DRWD . . . stained agarose gel containing PCR amplicons derived from marine bacteria genomic DNA. M: molecular weight markers, sizes in bp. -: **negative** control. +: positive controls for the amplicon and for ribosomal RNA. The lanes contain amplicons derived from T: genomic DNA. . .

DRWD . . . PCR amplicons derived from genomic DNA of individual species of marine bacteria. M: molecular weight markers, sizes in bp. -: **negative** control. +: positive controls for the amplicon and for

ribosomal RNA. The lanes contain amplicons derived from genomic DNA of.

DETD such as, for example, bacteria and mammalian cells, bacteria and yeasts, bacteria and plant cells, or gram positive and gram **negative** bacteria. A shuttle vector of the invention is capable of replicating in different species or strains of host organisms, and. . . (Pansegrau et al., 1994, J Mol Biol 239:623-663) or PBBR (Kovach et al., 1994, BioTechniques 16:800-801) are functional in many gram-**negative** bacteria, such as Pseudomonas, Agrobacterium, Escherichia, and Rhizobium. Many of the bacteria that harbor DNA comprising a broad host range. . . .

DETD beta.-glucuronidase (Jefferson, 1987, Plant Molec Biol. Rep 5:387-405), luciferase (Ow et al. 1986, Science 234:856-859), and B protein that regulates **anthocyanin** pigment production (Goff et al. 1990, EMBO J 9:2517-2522).

DETD efflux systems can actively secrete a broader range of potentially toxic compounds, thus reducing their accumulation inside the host organism. **Negative** feedback mechanisms, such as end-product inhibition of the metabolic pathway producing the compounds, may be avoided. Moreover, the isolation of. . . .

DETD gene locus that is complementary to the portion of the same gene locus integrated into the host chromosome; and a **negative** selection marker (e.g., glucose kinase, glkA) that is located distal to the positive selection marker and the substrate DNA cloning. . . . joined and the locus becomes functional. A second round of recombination occurs in vivo and causes the excision of the **negative** selection marker. Selection for the positive selection gene locus and against the **negative** selection marker allows the identification of host cells in which the desirable directed recombination took place. The host cells containing. . . .

DETD fluorescence results in addition of a small electrical charge to the particle. The change allows electromagnetic separation of positive and **negative** particles from a mixture. Separated particles may be directly deposited into individual wells of 96-well or 384-well plates.

DETD transcriptional activity in the host organism in the absence of the inducing activity or compound. A chemoresponsive promoter that respond **negatively** to the presence of an activity or compound by decreasing or ceasing transcriptional activity may also be used.

DETD Purified water (ddH.sub.2 O) for general use in media and solutions is purified by softening, **reverse osmosis**, and deionization. Pacific seawater (sea H.sub.2 O) is obtained from Scripps Institute of Oceanography (La Jolla, Calif.) and filtered before. . . .

DETD obtained from seawater collected near the Bahamas Islands were provided by the Harbor Branch Oceanographic Institute. Each of the wild-type gram-**negative** pigmented marine bacterial species was tested prior to preparation of the DNA libraries to determine redundancy, and to help determine. . . .

DETD The following assays were performed on the parental species of marine gram-**negative**/E. coli library, with the indicated results:

L8 ANSWER 3 OF 7 USPATFULL

ACCESSION NUMBER: 2001:63250 USPATFULL
TITLE: Composition
INVENTOR(S): Shibuya, Takashi, Okayama, Japan
Ario, Takeshi, Okayama, Japan
Fukuda, Shigeharu, Okayama, Japan
PATENT ASSIGNEE(S): Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo,
Okayama, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6224872	B1	20010501
APPLICATION INFO.:	US 1998-118897		19980720 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1997-218916	19970731
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Lankford, Jr., Leon B.	
LEGAL REPRESENTATIVE:	Browdy and Neimark	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1263	

AB A composition which comprises a **flavonoid** and a processed product of a plant of the genus *Pfaffia*. The composition effectively maintains and promotes the health, treats. . . .

SUMM The present invention relates to a novel composition, and more particularly, to a novel composition comprising a **flavonoid** and a processed product of a plant of the genus *Pfaffia* (may be abbreviated as processed *Pfaffia* product, hereinafter).

SUMM . . . treatment of Western medicine, however, may not always sufficiently attain their prescribed effects because they, in some cases, may cause **negative** results and induce serious side effects. As the increase of recent health consciousness, it is highly required to establish compositions. . . .

SUMM The composition according to the present invention contains a **flavonoid** and a processed product of a plant of the genus *Pfaffia* (may be designated as "*Pfaffia*", hereinafter). The processed product. . . .

SUMM . . . drying, conventional methods generally used in the food and pharmaceutical industries can be arbitrarily used; concentration in vacuo, membrane filtration, **reverse-osmosis** membrane concentration, ultrafiltration membrane filtration, drying in vacuo, freeze-drying, and spray-drying.

SUMM . . . conventional methods used in the food and pharmaceutical industries such as concentration in vacuo, concentration using membrane filters, concentration using **reverse osmosis** membranes, ultrafiltration concentration, drying in vacuo, freeze drying, spray drying, etc., can be arbitrarily used.

SUMM As described above, the compositions according to the present invention usually contain a **flavonoid(s)** and ecdysterone in an amount of 0.01-20 w/w % and 0.0001-2 w/w %, d.s.b., respectively. As for the compositions comprising. . . .

SUMM . . . basket-type centrifuge commercialized by Hitachi Tekkosho Co., Ltd., Tokyo, Japan, to remove insoluble substances, and concentrated using "HOROCEP HR5155F1", a **reverse-osmosis** membrane commercialized by Toyobo Co., Ltd., Tokyo, Japan, at a permeation rate of about 30 l/hour, into a 10.7 kg. . . .

SUMM A *Pfaffia* extract obtained by the method in Experiment 1-1, ".alpha.G HESPERIDIN PA", as a **flavonoid**, an enzyme-treated rutin commercialized by Toyo Sugar Refining Co., Ltd., Tokyo, Japan, and ".alpha.G RUTIN PS", an enzyme-treated rutin, Toyo. . . .

SUMM . . . and flavonoids have a strong macrophage activating activity that is synergistically enhanced by combination use of *Pfaffia* extract and a **flavonoid(s)**. This shows that the compositions of sample Nos. 4 and 5 as the present compositions exert a strong immunoenhancement activity.. . .

SUMM A *Pfaffia* extract obtained by the method in Experiment 1-1; ".alpha.G HESPERIDIN PA", as a **flavonoid**, an enzyme-treated hesperidin commercialized by Toyo Sugar Refining Co., Ltd., Tokyo, Japan; a pulverized guarana in Experiment 1-2; and a. . . .

SUMM . . . use of ".alpha.G RUTIN PS", an enzyme-treated rutin, Toyo Sugar Refining Co., Ltd., Tokyo, Japan, which was used as a **flavonoid** in this experiment in place of the enzyme-treated hesperidin, resulted in substantially the same result. Since the enzyme-treated products of. . . .

SUMM A Pfaffia extract obtained by the method in Experiment 1-1; ".alpha.G HESPERIDIN PA", as a **flavonoid**, an enzyme-treated hesperidin commercialized by Toyo Sugar Refining Co., Ltd., Tokyo, Japan; a pulverized guarana in Experiment 1-2; and an. . .

SUMM . . . RUTIN PS", an enzyme-treated rutin, Toyo Sugar Refining Co., Ltd., Tokyo, Japan, which was used in this experiment as a **flavonoid** in place of the enzyme-treated hesperidin, resulted in substantially the same result. Since the enzyme-treated products of flavonoids used in. . .

SUMM . . . critically enhanced by the addition of indigo extracts and/or pulverized extracts. In place of the enzyme-treated hesperidin used as a **flavonoid** in this experiment, the use of ".alpha.G RUTIN PS", an enzyme-treated rutin, Toyo Sugar Refining Co., Ltd., resulted in substantially the same result. The enzyme-treated product of a **flavonoid** used in this experiment is well known to be converted into free **flavonoid** by glucosidase in vivo; the result shows that flavonoids, non-enzyme-treated products, can also be used in the present invention. These. . .

SUMM A Pfaffia extract obtained by the method in Experiment 1-1; ".alpha.G HESPERIDIN PA", as a **flavonoid**, an enzyme-treated hesperidin commercialized by Toyo Sugar Refining Co., Ltd., Tokyo, Japan; ".alpha.G RUTIN PS", an enzyme-treated rutin, Toyo Sugar. . .

DETD Seven hundred grams of the above powdery Pfaffia extract, 100 g of a powdery **flavonoid**, 100 g of a powdery indigo extract, and 100 g of the pulverized guarana in Experiment 1-2 were mixed by. . .

CLM What is claimed is:

1. A composition which comprises a **flavonoid** and a processed product of a plant of the genus Pfaffia, said **flavonoid** being a member selected from the group consisting of hesperidin, rutin, naringin, eriodictin, hesperetin, quercetin, naringenin, eriodictyol, enzyme-treated hesperidin, enzyme-treated. . . and enzyme-treated eriodictin; said processed product being obtained by physically and/or chemically treating said plant; wherein the amount of said **flavonoid** is in an amount of 0.001-1-fold of said processed product, on a dry solid basis; said composition providing immunoenhancement and antiallergic activities compound with each of said **flavonoid** and said processed product.
6. The composition of claim 1, which contains 0.01-20 w/w % of said **flavonoid**, on a dry solid basis.

L8 ANSWER 4 OF 7 USPATFULL

ACCESSION NUMBER: 1998:128079 USPATFULL

TITLE: Methods for generating and screening novel metabolic pathways

INVENTOR(S): Thompson, Katie A., Del Mar, CA, United States
 Foster, Lyndon M., Carlsbad, CA, United States
 Peterson, Todd C., Chula Vista, CA, United States
 Nasby, Nicole Marie, San Diego, CA, United States
 Brian, Paul, San Diego, CA, United States

PATENT ASSIGNEE(S): Chromaxome Corporation, San Diego, CA, United States
 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5824485		19981020
APPLICATION INFO.:	US 1996-639255		19960424 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1995-427244, filed on 25 Apr 1995, now abandoned And Ser. No. US 1995-427348, filed on 25 Apr 1995, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Ketter, James		

ASSISTANT EXAMINER: Brusca, John S.

NUMBER OF CLAIMS: 45

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 25 Drawing Figure(s); 21 Drawing Page(s)

LINE COUNT: 4343

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . stained agarose gel containing PCR amplicons derived from marine bacteria genomic DNA. M: molecular weight markers, sizes in bp. -: **negative** control. +: positive controls for the amplicon and for ribosomal RNA. The lanes contain amplicons derived from T: genomic DNA. . .

SUMM . . . PCR amplicons derived from genomic DNA of individual species of marine bacteria. M: molecular weight markers, sizes in bp. -: **negative** control. +: positive controls for the amplicon and for ribosomal RNA. The lanes contain amplicons derived from genomic DNA of.

DETD . . . such as, for example, bacteria and mammalian cells, bacteria and yeasts, bacteria and plant cells, or gram positive and gram **negative** bacteria. A shuttle vector may contain a broad host range replication origin, such as those derived from IncP, IncQ plasmids, . . .

DETDbeta.-glucuronidase (Jefferson, 1987, Plant Molec Biol. Rep 5:387-405), luciferase (Ow et al. 1986, Science 234:856-859), and B protein that regulates **anthocyanin** pigment production (Goff et al. 1990, EMBO J 9:2517-2522).

DETD . . . efflux systems can actively secrete a broader range of potentially toxic compounds, thus reducing their accumulation inside the host organism. **Negative** feedback mechanisms, such as end-product inhibition of the metabolic pathway producing the compounds, may be avoided. Moreover, the isolation of. . .

DETD . . . fluorescence results in addition of a small electrical charge to the particle. The change allows electromagnetic separation of positive and **negative** particles from a mixture. Separated particles may be directly deposited into individual wells of 96-well or 384-well plates.

DETD . . . transcriptional activity in the host organism in the absence of the inducing activity or compound. A chemoresponsive promoter that respond **negatively** to the presence of an activity or compound by decreasing or ceasing transcriptional activity may also be used.

DETD Purified water (ddH.sub.2 O) for general use in media and solutions is purified by softening, **reverse osmosis**, and deionization. Pacific seawater (sea H.sub.2 O) is obtained from Scripps Institute of Oceanography (La Jolla, Calif.) and filtered before. . .

DETD . . . obtained from seawater collected near the Bahamas Islands were provided by the Harbor Branch Oceanographic Institute. Each of the wild-type gram-**negative** pigmented marine bacterial species was tested prior to preparation of the DNA libraries to determine redundancy, and to help determine. . .

DETD The following assays were performed on the parental species of marine gram-**negative**/E. coli library, with the indicated results:

L8 ANSWER 5 OF 7 USPATFULL

ACCESSION NUMBER: 1998:85814 USPATFULL

TITLE: Methods for generating and screening novel metabolic pathways

INVENTOR(S): Peterson, Todd C., Chula Vista, CA, United States
Foster, Lyndon M., Carlsbad, CA, United States
Brian, Paul, San Diego, CA, United States

PATENT ASSIGNEE(S): Chromaxome Corporation, San Diego, CA, United States
(U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5783431		19980721

APPLICATION INFO.: US 1996-738944 19961024 (8)
 RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1996-639255, filed
 on 24 Apr 1996
 DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Ketter, James
 ASSISTANT EXAMINER: Brusca, John S.
 LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
 NUMBER OF CLAIMS: 25
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 27 Drawing Figure(s); 23 Drawing Page(s)
 LINE COUNT: 4805
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DRWD . . . stained agarose gel containing PCR amplicons derived from
 marine bacteria genomic DNA. M: molecular weight markers, sizes in bp.
 -: **negative** control. +: positive controls for the amplicon and
 for ribosomal RNA. The lanes contain amplicons derived from T: genomic
 DNA.

DRWD . . . PCR amplicons derived from genomic DNA of individual species of
 marine bacteria. M: molecular weight markers, sizes in bp. -:
negative control. +: positive controls for the amplicon and for
 ribosomal RNA. The lanes contain amplicons derived from genomic DNA of.

DETD . . . such as, for example, bacteria and mammalian cells, bacteria
 and yeasts, bacteria and plant cells, or gram positive and gram
negative bacteria. A shuttle vector of the invention is capable
 of replicating in different species or strains of host organisms, and.
 . . . (Pansegrau et al., 1994, J Mol Biol 239:623-663) or PBBR (Kovach
 et al., 1994, BioTechniques 16:800-801) are functional in many gram-
negative bacteria, such as Pseudomonas, Agrobacterium,
 Escherichia, and Rhizobium. Many of the bacteria that harbor DNA
 comprising a broad host range.

DETD . . . beta.-glucuronidase (Jefferson, 1987, Plant Molec Biol. Rep
 5:387-405), luciferase (Ow et al. 1986, Science 234:856-859), and B
 protein that regulates **anthocyanin** pigment production (Goff et
 al. 1990, EMBO J 9:2517-2522).

DETD . . . efflux systems can actively secrete a broader range of
 potentially toxic compounds, thus reducing their accumulation inside the
 host organism. **Negative** feedback mechanisms, such as
 end-product inhibition of the metabolic pathway producing the compounds,
 may be avoided. Moreover, the isolation of.

DETD . . . fluorescence results in addition of a small electrical charge
 to the particle. The change allows electromagnetic separation of
 positive and **negative** particles from a mixture. Separated
 particles may be directly deposited into individual wells of 96-well or
 384-well plates.

DETD . . . transcriptional activity in the host organism in the absence of
 the inducing activity or compound. A chemoresponsive promoter that
 respond **negatively** to the presence of an activity or compound
 by decreasing or ceasing transcriptional activity may also be used.

DETD Purified water (ddH.sub.2 O) for general use in media and solutions is
 purified by softening, **reverse osmosis**, and
 deionization. Pacific seawater (sea H.sub.2 O) is obtained from Scripps
 Institute of Oceanography (La Jolla, Calif.) and filtered before.

DETD . . . obtained from seawater collected near the Bahamas Islands were
 provided by the Harbor Branch Oceanographic Institute. Each of the
 wild-type gram-**negative** pigmented marine bacterial species was
 tested prior to preparation of the DNA libraries to determine
 redundancy, and to help determine.

DETD The following assays were performed on the parental species of marine
 gram-**negative**/E. coli library, with the indicated results:

TITLE: Method for producing ready to pour frozen concentrated clarified fruit juice, fruit juice produced therefrom, and high solids fruit product

INVENTOR(S): Chen, Chin Shu, 1823 Cypress Gardens Blvd., Winter Haven, FL, United States 33884
Chen, William Apollo, 1998 Pacific Ave., Apt. 306, San Francisco, CA, United States 94109

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5756141		19980526
APPLICATION INFO.:	US 1996-619969		19960320 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Czaja, Donald E.		
ASSISTANT EXAMINER:	Fortuna, Jose A.		
LEGAL REPRESENTATIVE:	Pendorf, P.A., Stephan A.		
NUMBER OF CLAIMS:	13		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	851		

SUMM . . . contains flavor and aroma components, and the retentate is described as containing the spoilage microorganisms. The permeate is concentrated by **reverse osmosis** to levels above 42.degree. Brix. The retentate is treated to inactivate the spoilage microorganisms, and the retentate is then recombined. . . quality close to fresh juice. Based on the Lawhon et al patent, Cross (1989) describes a commercial design of an ultrafiltration-**reverse osmosis** process for membrane concentration of orange juice.

SUMM . . . during pressing. Thermal treatment inactivates the enzyme anthocynase, and the denaturation of the membranes enclosing the vacuoles (in which the **anthocyanin** are located) make it possible for more of the pigments to pass through. The **negative** effect of heating is to degrade the flavors and color. See Steven Nagy, Chin Shu Chen, and Philip E. Shaw. . .

L8 ANSWER 7 OF 7 USPATFULL

ACCESSION NUMBER: 91:84141 USPATFULL

TITLE: Process and apparatus for the removal of undesired components from aqueous feedstocks

INVENTOR(S): Perry, Mordechai, Petach Tikva, Israel
Katraro, Reuven, Rishon Lezion, Israel
Linder, Charles, Rehovot, Israel

PATENT ASSIGNEE(S): Membrane Products Kiryat Weizmann Ltd., Rehovot, Israel (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5057197		19911015
APPLICATION INFO.:	US 1989-348802		19890508 (7)

	NUMBER	DATE
PRIORITY INFORMATION:	IL 1988-86319	19880509
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Niebling, John F.	
ASSISTANT EXAMINER:	Phasge, Arun S.	
LEGAL REPRESENTATIVE:	Ladas & Parry	
NUMBER OF CLAIMS:	24	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)	
LINE COUNT:	822	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . economic advantages. For these reasons, conventional separation techniques are being increasingly replaced by techniques utilizing selective membranes. Such techniques include **reverse osmosis** (RO), ultrafiltration (UF) and microfiltration (MF), all of which are pressure driven, and electrodialysis (ED), which as the name implies. . . .

SUMM . . . leaves a product containing some lactose and salts, the content of which may be reduced by DF (see Ultrafiltration and **Reverse Osmosis** for the Dairy Industry, National institute for Dairy Research, Reading, England, 1985, p. 100). In the DF step, water is. . .

SUMM . . . MW>about 450 are usually very problematic. Thus, the biodegradation product humic acid is present in most natural waters as colloidal **negatively** charged matter, and during ED such ions accumulate progressively on and in the membrane, and the electrical resistance of the. . . .

SUMM . . . fouling ingredient, the at least one selective nonelectrodialysis membrane being selected from the group consisting of selective ultrafiltration, microfiltration and **reverse osmosis** membranes, thereby to obtain (a) treated feedstock and (b) a permeate having a significantly reduced content of the at least. . . .

SUMM . . . feedstock under superatmospheric pressure to the action of separation apparatus of a first type constituted by at least one selective **reverse osmosis** /ultrafiltration/microfiltration membrane adapted to retain at least one ingredient known to foul the second type of separation apparatus, thereby to obtain. . . .

SUMM . . . pressure; apparatus for contacting the pressurized feedstock with separation apparatus of a first type constituted by at least one selective **reverse osmosis** /ultrafiltration/microfiltration membrane apparatus adapted to retain at least one ingredient known to foul the second type of separation apparatus; apparatus for. . . .

DETD By using selective **reverse osmosis** membranes ("SELRO") it is possible to effect a transport of organic acids such as malic acid into the permeate. The. . . .

DETD		chloride	5%	58	0
sodium sulfate	5%	142	35		
sucrose	1%	360	95		
glucose	1%	180	70		
fructose	1%	180	70		
chlorogenic acid	1%	360	98		
anthocyanin (grape red color)					
	1%	900	99		
betaxanthine (red beet color)					
	1%	--	98		
sulfonated aromatics					
	1%	250	85		
sulfonated aromatics					
	1%	400	92		
sulfonated.					

CLM What is claimed is:

. . . therethrough of said at least one dissolved non-fouling organic acid, said at least one selective non-electrodialysis membrane being a selective **reverse osmosis** membrane having pores within the range of 0.1 to 1.0 nanometers, thereby to obtain (a) treated feedstock and (b) a. . . .

. . . feedstock under superatmospheric pressure to the action of separation means of a first type constituted by at least one selective **reverse osmosis** membrane having pores within the range of 0.1 to 1.0 nanometers adapted to retain at least one dissolved ingredient known. . . .

. . . process comprises the steps of: (i) subjecting said feedstock under

superatmospheric pressure to the action of at least one selective **reverse osmosis** membrane effective to retain chlorogenic acid while allowing the passage therethrough of malic acid, thereby to obtain (a) treated feedstock. . . .

. . . means for pressurizing said feedstock to a superatmospheric pressure; means for contacting said pressurized feedstock with at least one selective **reverse osmosis** membrane means effective to retain chlorogenic acid while allowing the passage therethrough of malic acid; means for removing treated pressurized. . . .

. . . admixing treated permeate with fresh feedstock and means for circulating the thus-obtained admixture serially to contact with both said selective **reverse osmosis** membrane means and said separation means.

=> d 114 1-2 ibib, kwic

L14 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1992:510427 CAPLUS

DOCUMENT NUMBER: 117:110427

TITLE: Study of color and aroma retention of black-
currant juice during concentration
by hyperfiltration

AUTHOR(S): Konja, Gordana; Clauss, E.; Kovacic, Zrinka; Vojvodic,
Vesna

CORPORATE SOURCE: Fac. Food Technol. Biotechnol., Zagreb, Croatia

SOURCE: Prehrambeno-Tehnoloska i Biotehnoloska Revija (1991),
29(3-4), 121-5

CODEN: PTBREK; ISSN: 0352-9193

DOCUMENT TYPE: Journal

LANGUAGE: English

TI Study of color and aroma retention of black-**currant**
juice during concentration by hyperfiltration

AB The effect of different membranes and operating conditions on color,
volatiles, sugars and acids was investigated during the concn. of black
currant juice by hyperfiltration. The two types of
membrane affected pigment retention differently. During the concn., the
proportion of free anthocyanins increased, while the proportion of
condensed pigments remained const. Volatiles retention depended to a
considerable extent on the process parameters, the membrane type used, the
degree of concn., and the operating temp. In contrast to the retention of
volatiles, the retention of sugars and total acids was almost completely
independent of the operating conditions. The retention of sugars was very
good with both types of membrane.

ST black **currant juice** concn color aroma; hyperfiltration
black **currant juice**

IT **Reverse osmosis**
(in black **currant juice** concn., color and aroma
response to conditions of)

IT Color
Odor and Odorous substances
(of black **currant juice**, concn. by hyperfiltration
effect on)

IT **Currant** (Ribes)
(R. nigrum, **juice**, concn. of, by hyperfiltration, color and
aroma response to conditions of)

L14 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:179730 CAPLUS

DOCUMENT NUMBER: 96:179730

TITLE: The preparation of fruit juice semiconcentrates by
reverse osmosis

AUTHOR(S): Demeczky, M.; Khell-Wicklein, M.; Godek-Kerek, E.

CORPORATE SOURCE: Cent. Food Res. Inst., Budapest, Hung.

SOURCE: Developments in Food Preservation (1981), 1, 93-119
CODEN: DEFPDY; ISSN: 0263-4376

DOCUMENT TYPE: Journal

LANGUAGE: English

TI The preparation of fruit juice semiconcentrates by **reverse**
osmosis

AB Expts. carried out by using pilot equipment with cellulose acetate
membranes verified that only semiconcs. of 30-35% solids content can be
produced using the **reverse osmosis** method. The high
osmotic pressure of the fruit and vegetable juices, the present tech.
conditions, compaction of the membranes, decrease in flux, losses of the
main chem. compds. and particularly of aroma components limit the use of
higher concn. rates. However, semiconcs. produced by **reverse**
osmosis are of high quality and are better than those prepd. by
vacuum evapn. Most of the semiconcs. could be stored at room temp. for

only a few weeks, but products of high acid content could be stored at 3.degree. for 12 mo.

IT Carboxylic acids, biological studies
RL: BIOL (Biological study)
(of fruit and vegetable juices, **reverse osmosis**
concn. effect on)

IT Apple juice
Tomato juice
(semiconc., manuf. of, **reverse osmosis** in)

IT Fruit and vegetable juices
(semiconcs., manuf. of, **reverse osmosis** in)

IT Beet
Carrot
Peach
Strawberry
(juice, semiconc., manuf. of, **reverse osmosis** in)

IT Phenols, biological studies
RL: BIOL (Biological study)
(poly-, of fruit and vegetable juices, **reverse**
osmosis concn. effect on)

IT Currant
(red, juice, semiconc., manuf. of, **reverse**
osmosis in)

IT Carbohydrates and Sugars, biological studies
RL: BIOL (Biological study)
(reducing, of fruit and vegetable juices, **reverse**
osmosis concn. effect on)

IT Cherry
(sour, juice, semiconc., manuf. of, **reverse osmosis**
in)

IT Currant
(R. nigrum, juice, semiconc., manuf. of, **reverse**
osmosis in)

IT 50-81-7, biological studies 490-83-5 7727-37-9, biological studies
RL: BIOL (Biological study)
(of fruit and vegetable juice semiconcs., **reverse**
osmosis concn. effect on)

=> d l14 ibib, kwic 12-13

L14 ANSWER 12 OF 14 USPATFULL

ACCESSION NUMBER: 92:96843 USPATFULL

TITLE: Fruit juice plus citrus fiber from pulp

INVENTOR(S): Mills, Susie H., Fort Thomas, KY, United States

Tarr, Robert E., Cincinnati, OH, United States

PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United
States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5162128		19921110
APPLICATION INFO.:	US 1990-609972		19901106 (7)
DISCLAIMER DATE:	20090428		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Paden, Carolyn		
LEGAL REPRESENTATIVE:	Dabek, Rose Ann, Yetter, Jerry J., Witte, Richard C.		
NUMBER OF CLAIMS:	20		
EXEMPLARY CLAIM:	1		
LINE COUNT:	646		

SUMM Any juice can be used to make the beverage of this invention.
For example, apple, cranberry, pear, peach, plum, apricot, nectarine,
grape, cherry, **currant**, raspberry, gooseberry, blackberry,

blueberry, strawberry, lemon, orange, grapefruit, tomato, lettuce, celery, spinach, cabbage, watercress, dandelion, rhubarb, carrot, beet, cucumber, pineapple, . . . mango, papaya, banana, watermelon and cantaloupe can be used. Preferred juices are the citrus juices, and most preferred is orange juice. Of the non-citrus juices, apple, pear, cranberry, strawberry, grape and cherry are preferred.

SUMM Other means of concentrating juice can be used. These would include reverse osmosis, sublimation concentration, freeze drying or freeze concentration. Economically, however, it is better to use an evaporation technique.

L14 ANSWER 13 OF 14 USPATFULL

ACCESSION NUMBER: 92:33935 USPATFULL
 TITLE: Fruit juice plus citrus fiber
 INVENTOR(S): Mills, Susie H., Fort Thomas, KY, United States
 Tarr, Robert E., Cincinnati, OH, United States
 PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5108774		19920428
APPLICATION INFO.:	US 1990-580751		19900911 (7)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1990-552280, filed on 12 Jul 1990, now patented, Pat. No. US 5073397		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Paden, Carolyn		
LEGAL REPRESENTATIVE:	Dabek, Rose Ann, Yetter, Jerry J., Witte, Richard C.		
NUMBER OF CLAIMS:	20		
EXEMPLARY CLAIM:	1		
LINE COUNT:	776		
DETD	Any juice can be used to make the beverage of this invention. For example, apple, cranberry, pear, peach, plum, apricot, nectarine, grape, cherry, currant, raspberry, gooseberry, blackberry, blueberry, strawberry, lemon, orange, grapefruit, tomato, lettuce, celery, spinach, cabbage, watercress, dandelion, rhubarb, carrot, beet, cucumber, pineapple, . . . mango, papaya, banana, watermelon and cantaloupe can be used. Preferred juices are the citrus juices, and most preferred is orange juice. Of the non-citrus juices, apple, pear, cranberry, strawberry, grape and cherry are preferred.		
DETD	Other means of concentrating juice can be used. These would include reverse osmosis, sublimation concentration, freeze drying or freeze concentration. Economically, however, it is better to use an evaporation technique.		

=> d 114 ibib, kwic 3-11

L14 ANSWER 3 OF 14 USPATFULL

ACCESSION NUMBER: 2003:10363 USPATFULL
 TITLE: Food products
 INVENTOR(S): Hynes, Michael P., Plymouth, MA, UNITED STATES
 Kaufman, Kathryn, Jamaica Plain, MA, UNITED STATES
 Hembling, Mark V., Sandwich, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003008057	A1	20030109
APPLICATION INFO.:	US 2002-138592	A1	20020430 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2001-845417, filed on 30 Apr 2001, PENDING'		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		

LEGAL REPRESENTATIVE: JEFFREY D. HSI, Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804

NUMBER OF CLAIMS: 28

EXEMPLARY CLAIM: 1

LINE COUNT: 1000

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM [0008] In alternate embodiments, the compositions are those further comprising one or more juice concentrates, those wherein the juice concentrates are cranberry; apple; raspberry; grape; strawberry; mango; tangerine; black currant; blueberry; peach; pineapple; pear; grapefruit; or a combination thereof, those wherein the juice concentrates are cranberry and one or more of: apple; raspberry; grape; strawberry; mango; tangerine; black currant; or blueberry (e.g., cranberry and apple, cranberry), or those wherein the juice concentrates are apple, pear, raspberry, kiwi, grape, orange, strawberry, lemon, peach, pineapple, passion fruit, mango, cranberry, blueberry, blackberry, or a . . .

SUMM [0015] In alternate embodiments, the compositions are those further comprising one or more juice concentrates, those wherein the juice concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black currant, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the juice concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black currant, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry), or those wherein the juice concentrates are apple, pear, raspberry, kiwi, grape, orange, strawberry, lemon, peach, pineapple, passion fruit, mango, cranberry, blueberry, blackberry, or a . . .

SUMM [0026] In alternate embodiments, the methods are those further comprising combining one or more juice concentrates, those wherein the juice concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black currant, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the juice concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black currant, or blueberry (e.g., cranberry and raspberry, cranberry and apple, cranberry), or those wherein the juice concentrates are apple, pear, raspberry, kiwi, grape, orange, strawberry, lemon, peach, pineapple, passion fruit, mango, cranberry, blueberry, blackberry, or a . . .

SUMM . . . to 5, alternatively about 48:48:4, respectively by weight. In alternate embodiments, the compositions are those further comprising one or more juice concentrates, those wherein the juice concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black currant, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the juice concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black currant, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry).

SUMM . . . to 5, alternatively about 50:49:1, respectively by weight. In alternate embodiments, the compositions are those further comprising one or more juice concentrates, those wherein the juice concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black currant, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the juice concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black currant, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry), or those wherein the juice concentrates are apple, pear, raspberry, kiwi, grape, orange, strawberry, lemon, peach, pineapple, passion fruit, mango, cranberry, blueberry, blackberry, or a . . .

SUMM [0038] Another embodiment is a composition (e.g., beverage; reduced sugar juice/juice drink; artificial sweetener-devoid

reduced sugar juice/juice drink made by the process of combining sucrose (e.g., cane sugar), fructose (e.g., dry fructose), pectin (e.g., fruit derived pectin,. . . alternatively about 48:48:4, respectively by weight. In alternate embodiments, the compositions are those made by further combining one or more juice concentrates, those wherein the juice concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black currant, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the juice concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black currant, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry).

SUMM [0039] Another embodiment is a composition (e.g., beverage; reduced sugar juice/juice drink; artificial sweetener-devoid reduced sugar juice/juice drink made by the process of combining sucrose (e.g., cane sugar), fructose (e.g., dry fructose), tara gum, and water (e.g.,. . . alternatively about 50:49:1, respectively by weight. In alternate embodiments, the compositions are those made by further combining one or more juice concentrates, those wherein the juice concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black currant, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the juice concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black currant, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry), or those wherein the juice concentrates are apple, pear, raspberry, kiwi, grape, orange, strawberry, lemon, peach, pineapple, passion fruit, mango, cranberry, blueberry, blackberry, or a. . .

SUMM . . . 12 or less (e.g., about 8-10). In alternate embodiments, the processes are those made by further selecting one or more juice concentrates, those wherein the juice concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black currant, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the juice concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black currant, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry), or those wherein the juice concentrates are apple, pear, raspberry, kiwi, grape, orange, strawberry, lemon, peach, pineapple, passion fruit, mango, cranberry, blueberry, blackberry, or a. . .

SUMM [0079] Juice concentrates used in the compositions may be of fruit or vegetable origin including, for example, cranberry, apple, raspberry, grape, strawberry, cherry, mango, tangerine, black currant, peach, pear, pineapple, grapefruit, kiwi, lemon, orange, passion fruit, blueberry, blackberry, and the like. Juice concentrates may be used singly or on combination. Sources of juice concentrates include, for example, Naumes Concentrates, Wapato, Wash.; Valley Concentrates, San Juanquin, Calif.; and Milne, Prosser, Wash.

SUMM [0080] The water used in the compositions can be filtered (e.g., charcoal, reverse osmosis) or deionized. The water may be non-carbonated or carbonated.

L14 ANSWER 4 OF 14 USPATFULL

ACCESSION NUMBER: 2002:336993 USPATFULL

TITLE: Food products

INVENTOR(S): Hynes, Michael P., Plymouth, MA, UNITED STATES
Kaufman, Kathryn, Jamaica Plain, MA, UNITED STATES
Hembling, Mark V., Sandwich, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002192350	A1	20021219

APPLICATION INFO.: US 2001-845417 A1 20010430 (9)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: JEFFREY D. HSI, Fish & Richardson P.C., 225 Franklin
Street, Boston, MA, 02110-2804
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 743

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM [0005] In one embodiment the invention is a composition (e.g., beverage; reduced sugar **juice/juice** drink; artificial sweetener-devoid reduced sugar **juice/juice** drink) comprising: sucrose (e.g., cane sugar), fructose (e.g., dry fructose), pectin (e.g., fruit derived pectin, citrus derived pectin, high methoxyl. . . to 5, alternatively about 48:48:4, respectively by weight. In alternate embodiments, the compositions are those further comprising one or more **juice** concentrates, those wherein the **juice** concentrates are cranberry; apple; raspberry; grape; strawberry; mango; tangerine; black **currant**; blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the **juice** concentrates are cranberry and one or more of: apple; raspberry; grape; strawberry; mango; tangerine; black **currant**; or blueberry (e.g., cranberry and apple, cranberry).

SUMM [0010] Another embodiment is the composition (e.g., beverage; reduced sugar **juice/juice** drink; artificial sweetener-devoid reduced sugar **juice/juice** drink) having proanthocyanidin content between about 10 mg and about 60 mg per 8 oz.; alternatively between about 25 mg. . . to 5, alternatively about 48:48:4, respectively by weight. In alternate embodiments, the compositions are those further comprising one or more **juice** concentrates, those wherein the **juice** concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the **juice** concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry).

SUMM [0019] In alternate embodiments, the methods are those further comprising combining one or more **juice** concentrates, those wherein the **juice** concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the **juice** concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, or blueberry (e.g., cranberry and raspberry, cranberry and apple, cranberry).

SUMM . . . to 5, alternatively about 48:48:4, respectively by weight. In alternate embodiments, the compositions are those further comprising one or more **juice** concentrates, those wherein the **juice** concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the **juice** concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry).

SUMM [0030] Another embodiment is a composition (e.g., beverage; reduced sugar **juice/juice** drink; artificial sweetener-devoid reduced sugar **juice/juice** drink made by the process of combining sucrose (e.g., cane sugar), fructose (e.g., dry fructose), pectin (e.g., fruit derived pectin,. . . alternatively about 48:48:4, respectively by weight. In alternate embodiments, the compositions are those made by further combining one or more **juice** concentrates, those wherein the **juice** concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black

currant, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the **juice** concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry).

SUMM . . . composition is about 12 or less. In alternate embodiments, the processes are those made by further selecting one or more **juice** concentrates, those wherein the **juice** concentrates are cranberry, apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, blueberry, peach, pineapple, pear, grapefruit, or a combination thereof, those wherein the **juice** concentrates are cranberry and one or more of: apple, raspberry, grape, strawberry, mango, tangerine, black **currant**, or blueberry, (e.g., cranberry and raspberry, cranberry and apple, cranberry).

SUMM [0066] **Juice** concentrates used in the compositions may be of fruit or vegetable origin including, for example, cranberry, apple, raspberry, grape, strawberry, cherry, mango, tangerine, black **currant**, peach, pear, pineapple, grapefruit, and the like. **Juice** concentrates may be used singly or on combination. Sources of **juice** concentrates include, for example, Naumes Concentrates, Wapato, Wash.; Valley Concentrates, San Juanquin, Calif.; and Milne, Prosser, Wash.

SUMM [0067] The water used in the compositions can be filtered (e.g., charcoal, **reverse osmosis**) or deionized. The water may be non-carbonated or carbonated.

L14 ANSWER 5 OF 14 USPATFULL

ACCESSION NUMBER: 2001:121117 USPATFULL

TITLE: Green tea extract subjected to cation exchange treatment and nanofiltration to improve clarity and color

INVENTOR(S): Ekanayake, Athula, Cincinnati, OH, United States
Bunger, John Robert, Hebron, KY, United States
Mohlenkamp, Jr., Marvin Joseph, Cincinnati, OH, United States

PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6268009	B1	20010731
APPLICATION INFO.:	US 1999-304658		19990504 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1996-606907, filed on 26 Feb 1996, now patented, Pat. No. US 6063428		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Cano, Milton		
ASSISTANT EXAMINER:	DuBois, Philip		
LEGAL REPRESENTATIVE:	Mc Bride, James F., Roof, Carl J.		
NUMBER OF CLAIMS:	26		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1136		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . smaller molecular weight or pore size than those typically used in ultrafiltration processes, but larger than those typically used in **reverse osmosis** processes. Like ultrafiltration, nanofiltration rejects only a portion of the solute components above a certain molecular size while passing those of a smaller size. By contrast, **reverse osmosis** membranes generally reject all solute components, including ions and will pass only water molecules.

SUMM . . . tea, the beverages of the present invention can comprise an effective amount of other flavor systems such as a fruit **juice**, vegetable **juice**, fruit flavors, vegetable flavor, as well as

mixtures of these flavor components. In particular, the combination of green tea together with fruit juices can have an appealing taste. The juice can be derived from apple, cranberry, pear, peach, plum, apricot, nectarine, grape, cherry, currant, raspberry, gooseberry, elderberry, blackberry, blueberry, strawberry, lemon, lime, mandarin, orange, grapefruit, cupuacu, potato, tomato, lettuce, celery, spinach, cabbage, watercress, dandelion, . . .

L14 ANSWER 6 OF 14 USPATFULL

ACCESSION NUMBER: 2000:61245 USPATFULL
 TITLE: Green tea extract subjected to cation exchange treatment and nanofiltration to improve clarity and color
 INVENTOR(S): Ekanayake, Athula, Cincinnati, OH, United States
 Bunger, John Robert, Hebron, KY, United States
 Mohlenkamp, Jr., Marvin Joseph, Cincinnati, OH, United States
 PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6063428		20000516
APPLICATION INFO.:	US 1996-606907		19960226 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Chin, Peter		
LEGAL REPRESENTATIVE:	McBride, James F., Clark, Karen F., Rasser, Jacobus C.		
NUMBER OF CLAIMS:	25		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1126		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . smaller molecular weight or pore size than those typically used in ultrafiltration processes, but larger than those typically used in reverse osmosis processes. Like ultrafiltration, nanofiltration rejects only a portion of the solute components above a certain molecular size while passing those of a smaller size. By contrast, reverse osmosis membranes generally reject all solute components, including ions and will pass only water molecules.

SUMM . . . tea, the beverages of the present invention can comprise an effective amount of other flavor systems such as a fruit juice, vegetable juice, fruit flavors, vegetable flavor, as well as mixtures of these flavor components. In particular, the combination of green tea together with fruit juices can have an appealing taste. The juice can be derived from apple, cranberry, pear, peach, plum, apricot, nectarine, grape, cherry, currant, raspberry, gooseberry, elderberry, blackberry, blueberry, strawberry, lemon, lime, mandarin, orange, grapefruit, cupuacu, potato, tomato, lettuce, celery, spinach, cabbage, watercress, dandelion, . . .

L14 ANSWER 7 OF 14 USPATFULL

ACCESSION NUMBER: 1999:30421 USPATFULL
 TITLE: Green tea extract subjected to cation exchange treatment and nanofiltration to improve clarity and color
 INVENTOR(S): Ekanayake, Athula, Cincinnati, OH, United States
 Bunger, John Robert, Cincinnati, OH, United States
 Mohlenkamp, Jr., Marvin Joseph, Cincinnati, OH, United States
 PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

NUMBER	KIND	DATE
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PATENT INFORMATION: US 5879733 19990309
 APPLICATION INFO.: US 1997-933048 19970918 (8)
 RELATED APPLN. INFO.: Division of Ser. No. US 1996-606907, filed on 26 Feb 1996
 DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Bhat, Nina
 LEGAL REPRESENTATIVE: Gressel, Gerry S., Clark, Karen F., Rasser, Jacobus C.
 NUMBER OF CLAIMS: 15
 EXEMPLARY CLAIM: 1
 LINE COUNT: 1112

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . smaller molecular weight or pore size than those typically used in ultrafiltration processes, but larger than those typically used in reverse osmosis processes. Like ultrafiltration, nanofiltration hi rejects only a portion of the solute components above a certain molecular size while passing those of a smaller size. By contrast, reverse osmosis membranes generally reject all solute components, including ions and will pass only water molecules.

SUMM . . . tea, the beverages of the present invention can comprise an effective amount of other flavor systems such as a fruit juice, vegetable juice, fruit flavors, vegetable flavor, as well as mixtures of these flavor components. In particular, the combination of green tea together with fruit juices can have an appealing taste. The juice can be derived from apple, cranberry, pear, peach, plum, apricot, nectarine, grape, cherry, currant, raspberry, gooseberry, elderberry, blackberry, blueberry, strawberry, lemon, lime, mandarin, orange, grapefruit, cupuacu, potato, tomato, lettuce, celery, spinach, cabbage, watercress, dandelion,. . .

L14 ANSWER 8 OF 14 USPATFULL

ACCESSION NUMBER: 95:49953 USPATFULL
 TITLE: Storage stable calcium-supplemented beverage concentrates
 INVENTOR(S): Burkes, Alice L., Cincinnati, OH, United States
 Butterbaugh, Jeffrey L., Cincinnati, OH, United States
 Fieler, George M., Cincinnati, OH, United States
 Gore, William J., Cincinnati, OH, United States
 Zuniga, Maria E., West Chester, OH, United States
 PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5422128		19950606
APPLICATION INFO.:	US 1993-122733		19930916 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1992-964315, filed on 21 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-814030, filed on 26 Dec 1991, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Paden, Carolyn		
LEGAL REPRESENTATIVE:	Dabek, Rose Ann, Graff, M. B., Rasser, J. C.		
NUMBER OF CLAIMS:	8		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1423		

SUMM The term "fruit juice(s)" refers to citrus juices, noncitrus juices such as apple juice, grape juice, pear juice, nectarine juice, currant juice, raspberry juice, gooseberry juice, blackberry juice, blueberry juice, strawberry

juice, custard-apple juice, cocoa juice, pomegranate juice, guava juice, kiwi juice, mango juice, papaya juice, watermelon juice, cantaloupe juice, cherry juice, cranberry juice, pineapple juice, peach juice, apricot juice, plum juice, prune juice, passion fruit juice, tamarindo juice, banana juice and mixtures of these juices. Preferred fruit juices are the citrus juices. The term "citrus juices" refers to fruit juices selected from orange juice, lemon juice, lime juice, grapefruit juice, tangerine juice and mixtures. The most preferred fruit juices for use are apple juice, pear juice, grape juice, passion fruit juice, peach juice, apricot juice, papaya juice and mixtures thereof.

SUMM Other means of concentrating juice can be used. These would include reverse osmosis, sublimation concentration, freeze drying or freeze concentration. Economically, however, it is preferred to use an evaporation technique.

L14 ANSWER 9 OF 14 USPATFULL

ACCESSION NUMBER: 95:27092 USPATFULL

TITLE: Storage stable calcium-supplemented beverage premix concentrates and syrups

INVENTOR(S): Burkes, Alice L., Cincinnati, OH, United States
 Fieler, George M., Cincinnati, OH, United States
 Gore, William J., Cincinnati, OH, United States
 Zuniga, Maria E., Cincinnati, OH, United States
 Butterbaugh, Jeffrey L., Cincinnati, OH, United States
 PATENT ASSIGNEE(S): The Proctor & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5401524		19950328
APPLICATION INFO.:	US 1993-138938		19931019 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1992-964238, filed on 21 Oct 1992, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Pratt, Helen		
LEGAL REPRESENTATIVE:	Dabek, Rose A., Rasser, J. C.		
NUMBER OF CLAIMS:	9		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1284		

SUMM The term "fruit juice(s)" refers to citrus juices and non-citrus juices. Examples are as apple juice, grape juice, pear juice, nectarine juice, currant juice, raspberry juice, orange juice, grapefruit juice, gooseberry juice, blackberry juice, blueberry juice, strawberry juice, custard-apple juice, cocoa juice, pomegranate juice, guava juice, kiwi juice, lemon juice, lime juice mango juice, papaya juice, watermelon juice, cantaloupe juice, cherry juice, cranberry juice, pineapple juice, peach juice, apricot juice, plum juice, prune juice, passion fruit juice, tamarindo juice, banana juice and mixtures thereof. Preferred juices are apple, pineapple, grape, cherry and mixtures thereof. In addition to fruit juices any botanical juice may be used as all or part of the flavor component of the present invention.

SUMM Other means of concentrating juice can be used. These would include

reverse osmosis, sublimation concentration, freeze drying or freeze concentration. Economically, however, it is preferred to use an evaporation technique.

L14 ANSWER 10 OF 14 USPATFULL

ACCESSION NUMBER: 95:13623 USPATFULL
TITLE: Storage stable calcium-supplemented beverage concentrates
INVENTOR(S): Zuniga, Maria E., Cincinnati, OH, United States
Fieler, George M., Cincinnati, OH, United States
Gore, William J., Cincinnati, OH, United States
Burkes, Alice L., Cincinnati, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5389387		19950214
APPLICATION INFO.:	US 1993-122316		19930916 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1991-814030, filed on 26 Dec 1991, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Paden, Carolyn		
LEGAL REPRESENTATIVE:	Dabek, Rose Ann, Rasser, J. C.		
NUMBER OF CLAIMS:	10		
EXEMPLARY CLAIM:	1		
LINE COUNT:	868		

SUMM The term "fruit juice(s)" refers to citrus juices, noncitrus juices such as apple juice, grape juice, pear juice, nectarine juice, currant juice, raspberry juice, gooseberry juice, blackberry juice, blueberry juice, strawberry juice, custard-apple juice, cocoa juice, pomegranate juice, guava juice, kiwi juice, mango juice, papaya juice, watermelon juice, cantaloupe juice, cherry juice, cranberry juice, pineapple juice, peach juice, apricot juice, plum juice, prune juice, passion fruit juice, tamarindo juice, banana juice and mixtures of these juices. Preferred fruit juices are the citrus juices. The term "citrus juices" refers to fruit juices selected from orange juice, lemon juice, lime juice, grapefruit juice, tangerine juice and mixtures. The most preferred fruit juices for use are apple juice, pear juice, grape juice, passion fruit juice, peach juice, apricot juice, papaya juice, and mixtures thereof.

SUMM Other means of concentrating juice can be used. These would include reverse osmosis, sublimation concentration, freeze drying or freeze concentration. Economically, however, it is preferred to use an evaporation technique.

L14 ANSWER 11 OF 14 USPATFULL

ACCESSION NUMBER: 95:9544 USPATFULL
TITLE: Beverage thickener emulsifier system
INVENTOR(S): Bunger, John R., Union, KY, United States
Keller, Brenda L., West Chester, OH, United States
Tarr, Robert E., Cincinnati, OH, United States
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

NUMBER	KIND	DATE

PATENT INFORMATION: US 5385748 19950131
APPLICATION INFO.: US 1993-131871 19931005 (8)
RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-783657, filed on 28
Oct 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Paden, Carolyn
LEGAL REPRESENTATIVE: Dabek, Rose Ann, Rasser, J. C.
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
LINE COUNT: 597

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM Any **juice** can be used to make the beverage of this invention.
For example, apple, cranberry, pear, peach, plum, apricot, nectarine,
grape, cherry, **currant**, raspberry, gooseberry, blackberry,
blueberry, strawberry, lime, lemon, orange, grapefruit, tangerine,
tomato, lettuce, celery, spinach, cabbage, watercress, dandelion,
rhubarb, carrot, beet, . . . papaya, tamarindo, banana, watermelon and
cantaloupe can be used. Preferred juices are the citrus juices, and most
preferred is orange **juice**. Of the non-citrus juices, apple,
pear, cranberry, strawberry, grape, cherry, tamarindo, pineapple, mango
and kiwi are preferred.

SUMM Other means of concentrating juice can be used. These would include
reverse osmosis, sublimation concentration, freeze
drying or freeze concentration. Economically, however, it is better to
use an evaporation technique.

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